REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended, is respectfully requested.

By the present Preliminary Amendment a new Abstract believed to be in more proper format under United States practice is submitted.

Further, claims 1-21 are cancelled without prejudice and new claims 22-42 are presented for examination. New claims 22-42 are deemed to be self-evident from the original disclosure, including the original claims, and thus are not deemed to raise any issues of new matter.

The present application is believed to be in condition for a full and thorough examination on the merits. An early and favorable consideration of the present application is hereby respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Surinder Sachar

Gregory J. Maier
Registration No. 25,599
Surinder Sachar
Registration No. 34,423
Attorney of Record

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)
SNS:smi

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ABSTRACT OF THE DISCLOSURE

Method of optical characterisation of materials without using a physical model

To characterise a layer of material over an interval A of values taken by a function $\alpha(\lambda)$ (λ: wavelength), (1) we obtain, via reflectometry and/or ellipsometry over A, a measured spectrum Ψ, (2) we choose m values $\alpha_1 \ldots \alpha_m$ of α in A ($m \geq 1$), with $B=\{\alpha$ such that $\min(\alpha_i) \leq \alpha \leq \max(\alpha_i)\}$ when $m>1$, and B=A when m=1, (3) we choose m values of complex indexes n+jk for the $m\alpha_i$, (4) if $m \neq 1$ we calculate via interpolation the index $n(\alpha)$ over B, from $(\alpha_i, n_i=n(\alpha_i))$, $1 \leq i \leq m$, and if m=1, $n(\alpha)=n_i(\alpha_i)$ over B, (5) we choose M parameters, $M \leq 2m+1$, and an error function Er and, via a minimising of Er with M parameters, (a) applying the interpolation law of the (α_i, n_i) over B, we deduce $n(\alpha)$, $\alpha \in B$, (b) using $n(\alpha)$ and the thickness ε of the layer, we calculate a theoretical spectrum $\overline{\Psi}$ $(n(\alpha), \varepsilon)$, (c) we compare Ψ and $\overline{\Psi}$ using Er and, if $Er(\Psi, \overline{\Psi}) \leq \underline{e}$ or minimal, we go to (e), if not (d) we make the M parameters vary so as to approach the minimum of Er $(\Psi, \overline{\Psi})$, and we go to (a), (e) if $Er(\Psi, \overline{\Psi}) < \underline{e}$, the index is set equal to the last one obtained, otherwise we increase m and we go to (2).

(No figure for the abstract).